In [1]:

```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from datetime import datetime
```

In [194]:

```python
df = pd.read_csv(r'C:\Users\Yash\Downloads\Movie_Data.csv')
```

In [195]:

```python
df
```

Out[195]:

	Unnamed: 0	Movie Name	Raiting	Release Date	Run Time	Genres	Direc
0	0	Doctor Strange in the Multiverse of Madness	75.0	05/06/2022	2h 6m	Fantasy, Action, Adventure	St D
1	1	Fantastic Beasts: The Secrets of Dumbledore	68.0	04/15/2022	2h 22m	Fantasy, Adventure, Action	Da Ya
2	2	Dog	74.0	02/18/2022	1h 42m	Drama, Comedy	R Car
3	3	Sonic the Hedgehog 2	77.0	04/08/2022	2h 2m	Action, Adventure, Family, Comedy	J M
4	4	Morbius	65.0	04/01/2022	1h 45m	Action, Science Fiction, Fantasy	Da Espin
...	...	...	...	...	...	...	...
9995	9995	The Scary House	57.0	10/30/2020	1h 40m	Family, Fantasy, Horror	Da Procha
9996	9996	Maria Full of Grace	73.0	04/01/2004	1h 41m	Drama, Thriller, Crime	Josl Mars
9997	9997	The Art of Getting By	66.0	06/17/2011	1h 23m	Drama, Romance	Ga Wies
9998	9998	I'm a Girl, I'm a Princess	60.0	10/28/2021	2h	Drama	Fede Pala
9999	9999	Lake Eerie	38.0	01/15/2016	1h 44m	Thriller, Horror, Science Fiction	C Maj

10000 rows × 8 columns

In [196]:

```python
1  df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10000 entries, 0 to 9999
Data columns (total 8 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   Unnamed: 0    10000 non-null  int64
 1   Movie Name    10000 non-null  object
 2   Raiting       10000 non-null  float64
 3   Release Date  10000 non-null  object
 4   Run Time      9815 non-null   object
 5   Genres        9914 non-null   object
 6   Director      9913 non-null   object
 7   Movie_link    10000 non-null  object
dtypes: float64(1), int64(1), object(6)
memory usage: 625.1+ KB
```

In [197]:

```python
1  df.isnull().sum()
```

Out[197]:

```
Unnamed: 0        0
Movie Name        0
Raiting           0
Release Date      0
Run Time        185
Genres           86
Director         87
Movie_link        0
dtype: int64
```

In [198]:

```python
1  df.drop(columns=['Unnamed: 0'],inplace=True)
```

In [199]:

```python
1  df.drop(columns=['Movie_link'],inplace=True)
```

In [200]:

```python
1  df['Run Time'].fillna('None',inplace=True)
2  df['Genres'].fillna('-',inplace=True)
3  df['Director'].fillna('-',inplace=True)
```

In [201]:

```python
1  df.isnull().sum()
```

Out[201]:

```
Movie Name      0
Raiting         0
Release Date    0
Run Time        0
Genres          0
Director        0
dtype: int64
```

In [201]:

```python
1  df.isnull().sum()
```

Out[201]:

In [202]:

```
1  df[:60]
```

Out[202]:

	Movie Name	Raiting	Release Date	Run Time	Genres	Dire
0	Doctor Strange in the Multiverse of Madness	75.0	05/06/2022	2h 6m	Fantasy, Action, Adventure	Steve
1	Fantastic Beasts: The Secrets of Dumbledore	68.0	04/15/2022	2h 22m	Fantasy, Adventure, Action	David Y
2	Dog	74.0	02/18/2022	1h 42m	Drama, Comedy	Reid Ca
3	Sonic the Hedgehog 2	77.0	04/08/2022	2h 2m	Action, Adventure, Family, Comedy	Josh I
4	Morbius	65.0	04/01/2022	1h 45m	Action, Science Fiction, Fantasy	D Espi
5	The Lost City	68.0	03/25/2022	1h 52m	Action, Adventure, Comedy	Aaron
6	Spider-Man: No Way Home	81.0	12/17/2021	2h 28m	Action, Adventure, Science Fiction	Steve
7	Memory	73.0	04/29/2022	1h 54m	Action, Thriller, Crime	M Cam
8	Collision	60.0	06/16/2022	1h 39m	Thriller, Crime, Drama	Fa Mar
9	Centauro	66.0	06/15/2022	1h 29m	Action, Crime, Thriller	D Calpa
10	Spiderhead	57.0	06/17/2022	1h 46m	Science Fiction, Thriller	Jo Kos
11	Jurassic World Dominion	67.0	06/10/2022	2h 27m	Action, Adventure, Science Fiction	Trevo
12	The Black Phone	72.0	06/24/2022	1h 43m	Horror, Thriller	Derric
13	Shark Bait	70.0	05/13/2022	1h 27m	Horror, Thriller, Action	James I
14	Panama	59.0	03/17/2022	1h 40m	Action, Thriller	Neve
15	The Northman	73.0	04/22/2022	2h 17m	Action, Adventure, Fantasy	R Eg
16	Turning Red	75.0	03/10/2022	1h 40m	Animation, Family, Comedy, Fantasy	Dome
17	Uncharted	71.0	02/18/2022	1h 56m	Action, Adventure	R Fleis
18	The Desperate Hour	61.0	09/12/2021	1h 24m	Thriller	F N

	Movie Name	Raiting	Release Date	Run Time	Genres	Dire
19	Hustle	79.0	06/03/2022	1h 58m	Drama, Comedy	Jere Z
20	The Wrath of God	64.0	06/15/2022	1h 37m	Thriller, Drama	Seba Sch
21	Beyond Infinity: Buzz and the Journey to Light...	72.0	06/10/2022	35m	Documentary	Tony Ka
22	The Batman	78.0	03/04/2022	2h 57m	Crime, Mystery, Thriller	Matt Re
23	Clean	64.0	01/28/2022	1h 33m	Crime, Drama, Thriller	Paul :
24	The Unbearable Weight of Massive Talent	71.0	04/22/2022	1h 47m	Action, Comedy, Crime	Gorn
25	A Day to Die	63.0	06/23/2022	1h 41m	Action, Thriller, Crime	Dw H
26	Interceptor	63.0	05/26/2022	1h 38m	Action, Thriller, Adventure	Mat F
27	Dragon Ball Super: Super Hero	80.0	08/26/2022	1h 39m	Animation, Science Fiction, Action	Toriy
28	See for Me	63.0	01/28/2022	1h 32m	Thriller, Drama, Crime, Mystery, Horror	Ra (
29	Lightyear	71.0	06/17/2022	1h 47m	Animation, Science Fiction, Adventure, Action,...	A Mac
30	The Exorcism of God	69.0	03/31/2022	1h 38m	Horror	Aleja Hic
31	Top Gun: Maverick	84.0	05/27/2022	2h 11m	Action, Drama	Jack
32	American Sicario	56.0	01/06/2022	1h 30m	Crime, Action	RJ Co
33	The Bad Guys	78.0	04/22/2022	1h 40m	Animation, Comedy, Family, Crime	F P
34	Gasoline Alley	53.0	02/25/2022	1h 37m	Action, Thriller, Crime, Mystery	Ed D
35	Encanto	77.0	11/24/2021	1h 42m	Animation, Comedy, Family, Fantasy	Jared
36	Moonfall	65.0	02/04/2022	2h 10m	Science Fiction, Adventure, Action	Ro Emm
37	Veneciafrenia	57.0	04/21/2022	1h 40m	Horror	Álex Ig
38	Chickenhare and the Hamster of Darkness	77.0	02/16/2022	1h 31m	Adventure, Animation, Comedy, Family, Fantasy	Ben Sta
39	Thor: Love and Thunder	75.0	07/08/2022	1h 59m	Action, Adventure, Fantasy	Taika V

	Movie Name	Raiting	Release Date	Run Time	Genres	Dire
40	The Contractor	65.0	03/10/2022	1h 43m	Action, Thriller	Tarik S
41	Father There Is Only One	74.0	08/02/2019	1h 35m	Comedy	San Se
42	Demon Slayer -Kimetsu no Yaiba- The Movie: Mug...	84.0	08/13/2021	1h 57m	Animation, Action, Adventure, Fantasy	H Soto
43	Titanic 666	55.0	04/15/2022	1h 31m	Thriller, Horror	Nick
44	Chip 'n Dale: Rescue Rangers	72.0	05/20/2022	1h 39m	Animation, Family, Comedy, Adventure, Mystery	A Sch
45	Hotel Transylvania: Transformania	71.0	02/25/2022	1h 27m	Animation, Family, Fantasy, Comedy, Adventure	Ge Tartako
46	Minions: The Rise of Gru	80.0	07/01/2022	1h 27m	Family, Animation, Action, Adventure, Comedy	Matt F
47	The Jack in the Box: Awakening	59.0	02/24/2022	1h 29m	Horror	Lawr Fo
48	The Grandmother	59.0	01/28/2022	1h 40m	Horror	Paco F
49	Dark Cloud	67.0	06/28/2022	1h 21m	Science Fiction, Horror, Thriller	Jay
50	Moonbound	60.0	03/31/2022	1h 21m	Animation, Adventure, Family, Fantasy	Ali Sa A
51	The Takedown	60.0	05/06/2022	1h 59m	Comedy, Action	L Let
52	Venom: Let There Be Carnage	70.0	10/01/2021	1h 37m	Science Fiction, Action, Adventure	Kelly M
53	The Outfit	71.0	03/18/2022	1h 45m	Crime, Drama, Thriller	Gra M
54	Shang-Chi and the Legend of the Ten Rings	77.0	09/03/2021	2h 12m	Action, Adventure, Fantasy	D D Cr
55	My Hero Academia: World Heroes' Mission	76.0	08/06/2021	1h 45m	Animation, Action, Fantasy, Adventure	K Horl
56	Father There Is Only One 2	71.0	07/29/2020	1h 36m	Comedy, Family	San Se
57	King	68.0	02/16/2022	1h 45m	Adventure, Comedy, Family	D Mo
58	Virus:32	73.0	04/21/2022	1h 30m	Horror	Gus Herná
59	El último zombi	60.0	12/02/2021	None	Horror	M Basterre

In [16]:

```
1  df.rename(columns={'Raiting':'Rating'},inplace=True)
2  df
```

Out[16]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
0	Doctor Strange in the Multiverse of Madness	75.0	05/06/2022	2h 6m	Fantasy, Action, Adventure	Steve Ditko
1	Fantastic Beasts: The Secrets of Dumbledore	68.0	04/15/2022	2h 22m	Fantasy, Adventure, Action	David Yates
2	Dog	74.0	02/18/2022	1h 42m	Drama, Comedy	Reid Carolin
3	Sonic the Hedgehog 2	77.0	04/08/2022	2h 2m	Action, Adventure, Family, Comedy	Josh Miller
4	Morbius	65.0	04/01/2022	1h 45m	Action, Science Fiction, Fantasy	Daniel Espinosa
...	...	...	...	...	...	...
9995	The Scary House	57.0	10/30/2020	1h 40m	Family, Fantasy, Horror	Daniel Prochaska
9996	Maria Full of Grace	73.0	04/01/2004	1h 41m	Drama, Thriller, Crime	Joshua Marston
9997	The Art of Getting By	66.0	06/17/2011	1h 23m	Drama, Romance	Gavin Wiesen
9998	I'm a Girl, I'm a Princess	60.0	10/28/2021	2h	Drama	Federico Palazzo
9999	Lake Eerie	38.0	01/15/2016	1h 44m	Thriller, Horror, Science Fiction	Chris Majors

10000 rows × 6 columns

In [152]:

```
1  top_movie = df.groupby('Rating')[['Movie Name','Release Date','Run Time','Genres','Dire
2  top_movie=top_movie_rating.reset_index()
```
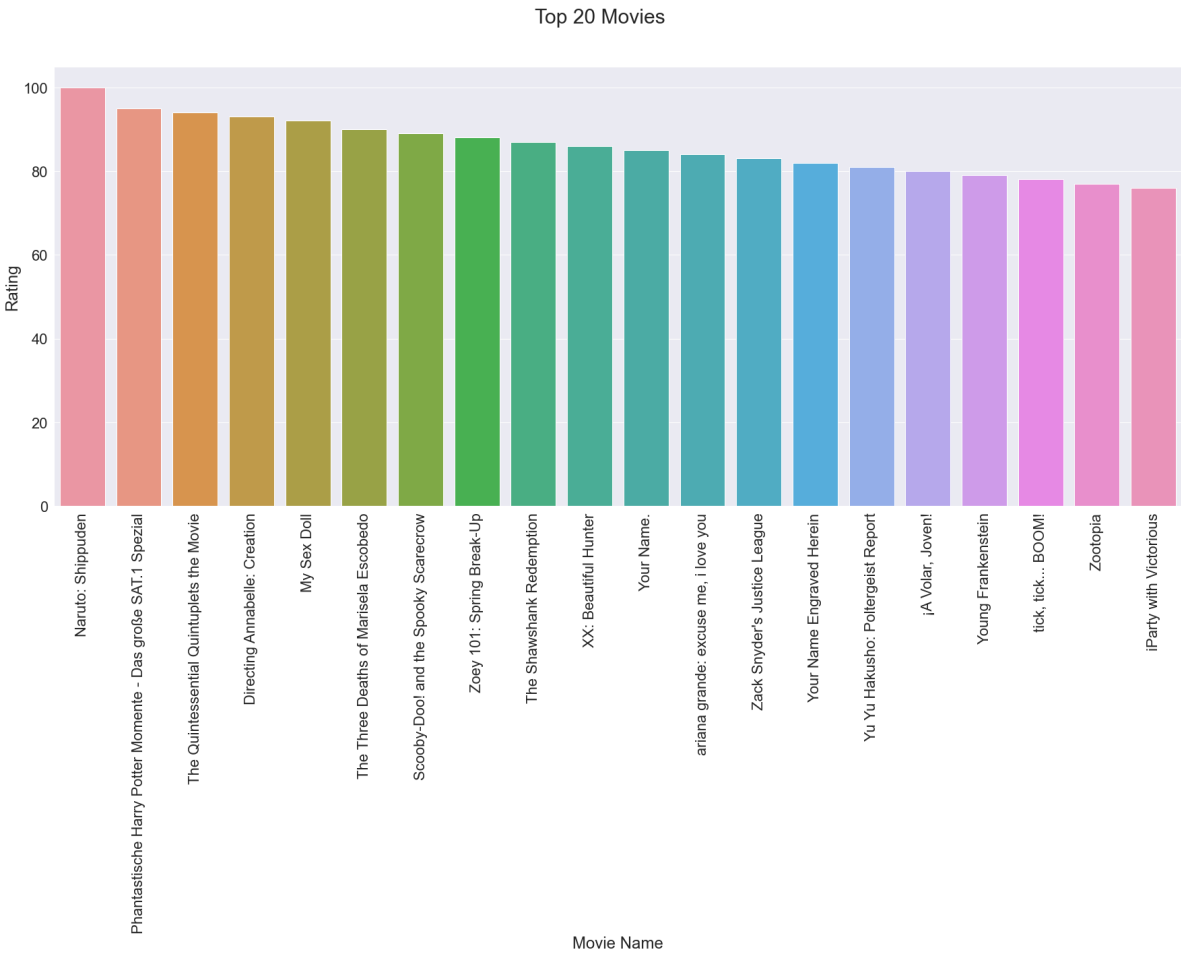
In [153]:

```
1  top_movie
```

Out[153]:

	index	Rating	Movie Name	Release Date	Run Time	Genres	Director
0	0	100.0	Naruto: Shippuden	11/10/2014	None	Drama, Romance	Mark Taylor
1	1	95.0	Phantastische Harry Potter Momente - Das große...	10/31/2021	None	Documentary, Music	-
2	2	94.0	The Quintessential Quintuplets the Movie	05/20/2022	2h 16m	Animation, Comedy, Romance	Masato Jimbo
3	3	93.0	Directing Annabelle: Creation	08/07/2017	43m	Documentary	David F. Sandberg
4	4	92.0	My Sex Doll	10/30/2020	1h 42m	Romance	Tosca Musk
...	...	...	...	...	...	...	...
73	73	18.0	Doomsday	08/19/2015	1h 34m	Science Fiction, Action	Neil Johnson
74	74	15.0	The Sadness	05/29/1981	None	Thriller, Drama	R. F. Pangborn
75	75	13.0	El futuro ya no es lo que era	04/29/2016	1h 46m	Comedy	Pedro L. Barbero
76	76	10.0	Wet and Swinging	12/02/1983	7m	Science Fiction, Horror	Shusuke Kaneko
77	77	0.0	개들의 도시	12/21/2022	None	Thriller, TV Movie	오정택

78 rows × 7 columns

In [154]:

```python
fig=plt.figure(figsize=(30,12))
sns.barplot(x='Movie Name', y='Rating',data=top_movie.head(20))
plt.suptitle("Top 20 Movies", fontsize=30)
plt.xticks(rotation=90)
plt.show()
```


Top 20 Movies

In [ ]:

```python

```

In [47]:

```python
df["Release Date"] = pd.to_datetime(df["Release Date"], format = "%m/%d/%Y")
df
```

Out[47]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
0	Doctor Strange in the Multiverse of Madness	75.0	2022-05-06	2h 6m	Fantasy, Action, Adventure	Steve Ditko
1	Fantastic Beasts: The Secrets of Dumbledore	68.0	2022-04-15	2h 22m	Fantasy, Adventure, Action	David Yates
2	Dog	74.0	2022-02-18	1h 42m	Drama, Comedy	Reid Carolin
3	Sonic the Hedgehog 2	77.0	2022-04-08	2h 2m	Action, Adventure, Family, Comedy	Josh Miller
4	Morbius	65.0	2022-04-01	1h 45m	Action, Science Fiction, Fantasy	Daniel Espinosa
...	...	...	...	...	...	...
9995	The Scary House	57.0	2020-10-30	1h 40m	Family, Fantasy, Horror	Daniel Prochaska
9996	Maria Full of Grace	73.0	2004-04-01	1h 41m	Drama, Thriller, Crime	Joshua Marston
9997	The Art of Getting By	66.0	2011-06-17	1h 23m	Drama, Romance	Gavin Wiesen
9998	I'm a Girl, I'm a Princess	60.0	2021-10-28	2h	Drama	Federico Palazzo
9999	Lake Erie	38.0	2016-01-15	1h 44m	Thriller, Horror, Science Fiction	Chris Majors

10000 rows × 6 columns

In [ ]:

```python

```

In [48]:

```python
data = df.sort_values(by='Release Date',ascending=False)
data
```

Out[48]:

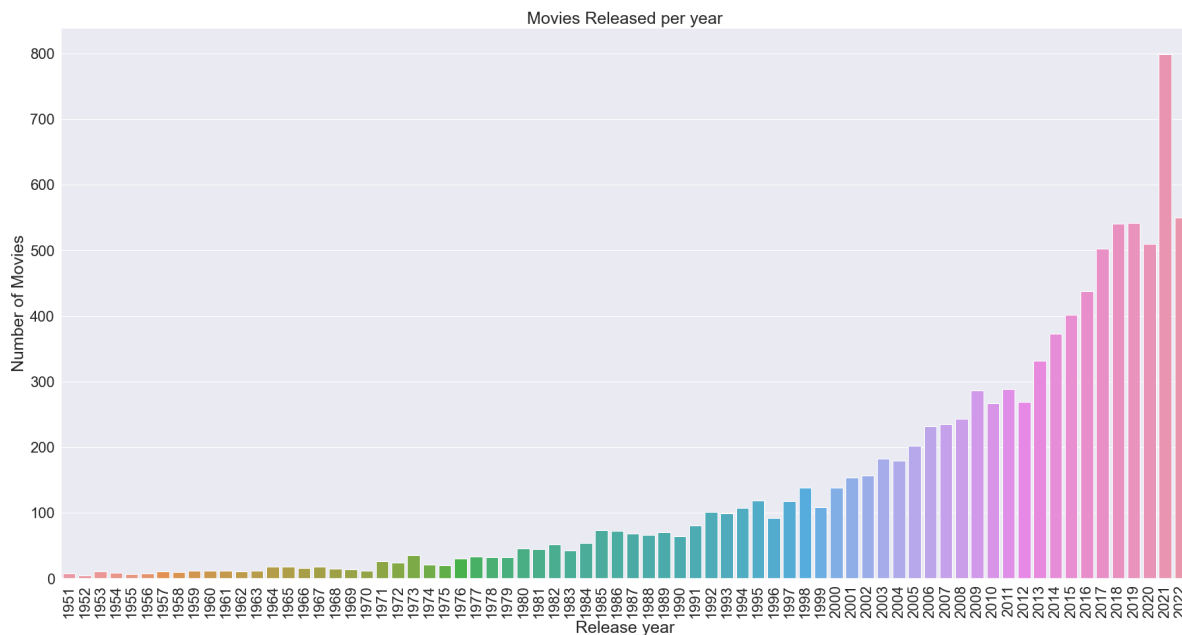|	Movie Name	Rating	Release Date	Run Time	Genres	Director
1260	Shazam! Fury of the Gods	0.0	2022-12-21	None	Comedy, Action, Fantasy	C.C. Beck
1025	Puss in Boots: The Last Wish	0.0	2022-12-21	None	Animation, Adventure, Comedy, Family, Fantasy	Joel Crawford
397	Avatar: The Way of Water	0.0	2022-12-16	None	Fantasy, Action, Adventure, Science Fiction	James Cameron
2594	Roald Dahl's Matilda the Musical	0.0	2022-12-02	None	Comedy, Family, Fantasy	Matthew Warchus
3064	Black Panther: Wakanda Forever	0.0	2022-11-11	None	Action, Adventure, Science Fiction	Ryan Coogler
...	...	...	...	...	...	...
7472	Battleship Potemkin	77.0	1925-12-24	1h 15m	Drama, History	Sergei Eisenstein
9259	Häxan	76.0	1922-09-18	1h 45m	Documentary, Horror, History	Benjamin Christensen
4947	Nosferatu	77.0	1922-03-15	1h 34m	Fantasy, Horror	F. W. Murnau
6690	The Kid	82.0	1921-02-06	53m	Comedy, Drama	Charlie Chaplin
7978	A Trip to the Moon	80.0	1902-04-17	15m	Adventure, Fantasy, Science Fiction	Georges Méliès

10000 rows × 6 columns

In [72]:

```python
plt.figure(figsize=(30,15))
sns.countplot(df[df['Release Date'].dt.year>1950]['Release Date'].dt.year)
plt.title('Movies Released per year',fontsize=25)
plt.xlabel('Release year',fontsize=25)
plt.ylabel('Number of Movies',fontsize=25)
plt.xticks(rotation=90)
plt.show()
```

C:\Users\Yash\anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureW
arning: Pass the following variable as a keyword arg: x. From version 0.12,
the only valid positional argument will be `data`, and passing other argumen
ts without an explicit keyword will result in an error or misinterpretation.
  warnings.warn(

In [ ]:

```python
###
```

- **Total Numbers of movies count release in Last 5 years**

In [59]:

```python
years = [2018,2019,2020,2021,2022]
for i in years:
    count = len(data[data['Release Date'].dt.year==i])
    print(f'{i} movie count is {count}')
```

```
2018 movie count is 540
2019 movie count is 542
2020 movie count is 510
2021 movie count is 799
2022 movie count is 550
```

- the highest number of movies was release in year 2021

In [122]:

```python
movies_2021 = data[data['Release Date'].dt.year==2021]
movies_2021=movies_2021.sort_values(by='Rating',ascending=False)
movies_2021
```
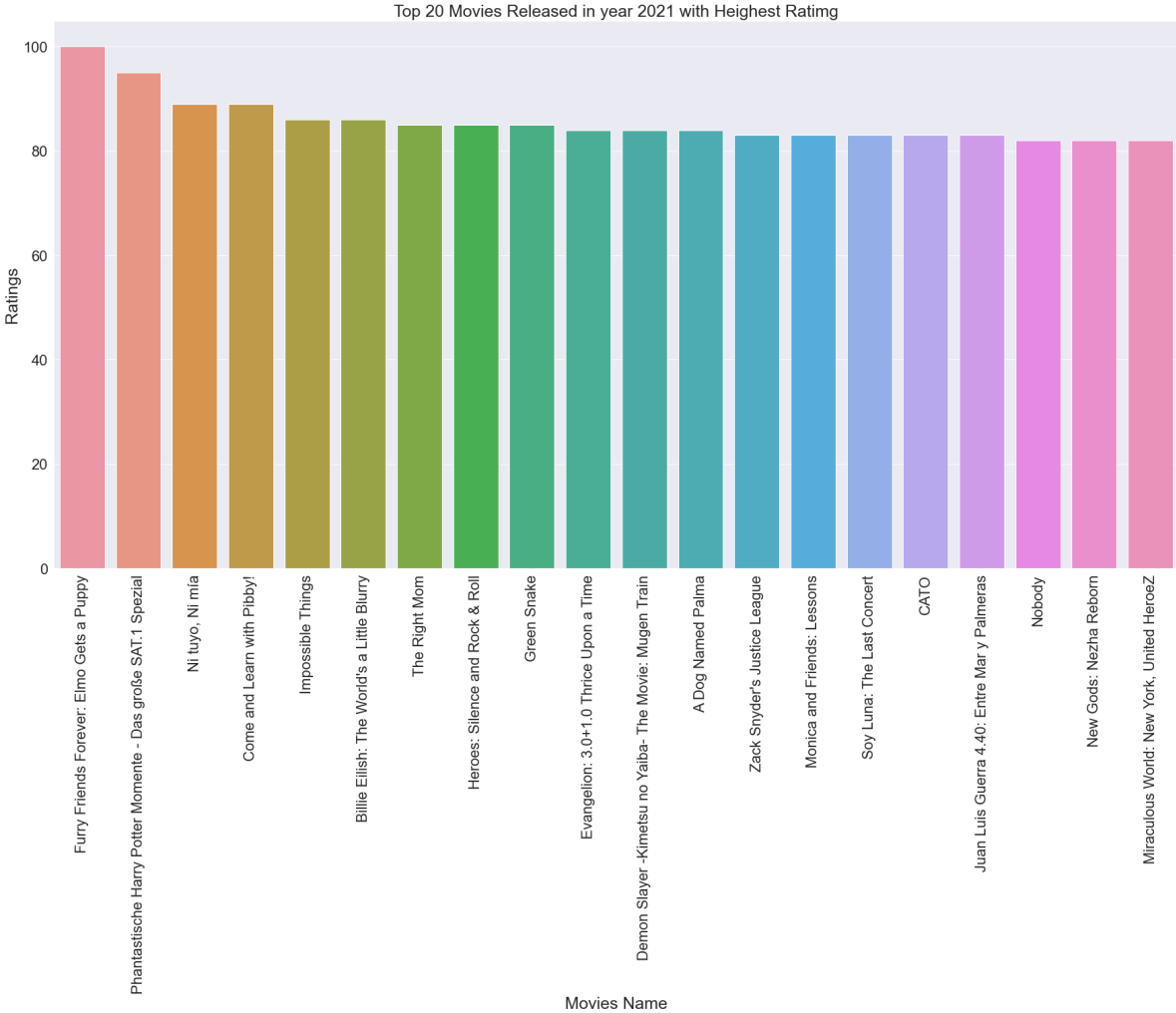
Out[122]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
4161	Furry Friends Forever: Elmo Gets a Puppy	100.0	2021-08-05	26m	Animation, Family	Mark Taylor
2585	Phantastische Harry Potter Momente - Das große...	95.0	2021-10-31	None	-	-
5067	Ni tuyo, Ni mía	89.0	2021-08-19	None	Drama	Sandra Solares
7497	Come and Learn with Pibby!	89.0	2021-10-30	2m	Animation, Horror	Dodge Greenley
4615	Impossible Things	86.0	2021-06-17	1h 29m	Family, Drama	Ernesto Contreras
...	...	...	...	...	...	...
3963	(Telephone)	20.0	2021-12-31	1h 30m	-	Jerzain Ortega
6638	Black Coffin	15.0	2021-02-10	None	Drama, Music, Thriller	F. A. Jiménez
5013	The Mystic Nine	0.0	2021-06-06	None	-	-
6765	Sisters Virus	0.0	2021-02-24	1h 18m	Drama	Choi Jae-hoo
4123	Light-Year	0.0	2021-03-16	1h 40m	Drama, Romance	Hossein Toghiri

799 rows × 6 columns

In [124]:

```python
plt.figure(figsize=(30,15))
sns.barplot(x='Movie Name', y='Rating',data=movies_2021.head(20))
plt.title('Top 20 Movies Released in year 2021 with Heighest Ratimg',fontsize=25)
plt.xlabel('Movies Name',fontsize=25)
plt.ylabel('Ratings',fontsize=25)
plt.xticks(rotation=90)
plt.show()
```


In [ ]:

```python

```

In [138]:

```
1  movies_2021['Release Date'].dt.month.value_counts()
```

Out[138]:

```
10     103
7       81
8       79
6       75
11      75
9       73
12      65
4       60
2       60
3       48
5       42
1       38
Name: Release Date, dtype: int64
```

- Since from above data, movies release in month of october is highest in year 2021.

In [139]:

```
1  movies_oct_2021 = data[(data['Release Date'].dt.year==2021) & (data['Release Date'].dt.
2  movies_oct_2021=movies_oct_2021.sort_values(by='Rating',ascending=False)
3  movies_oct_2021
```
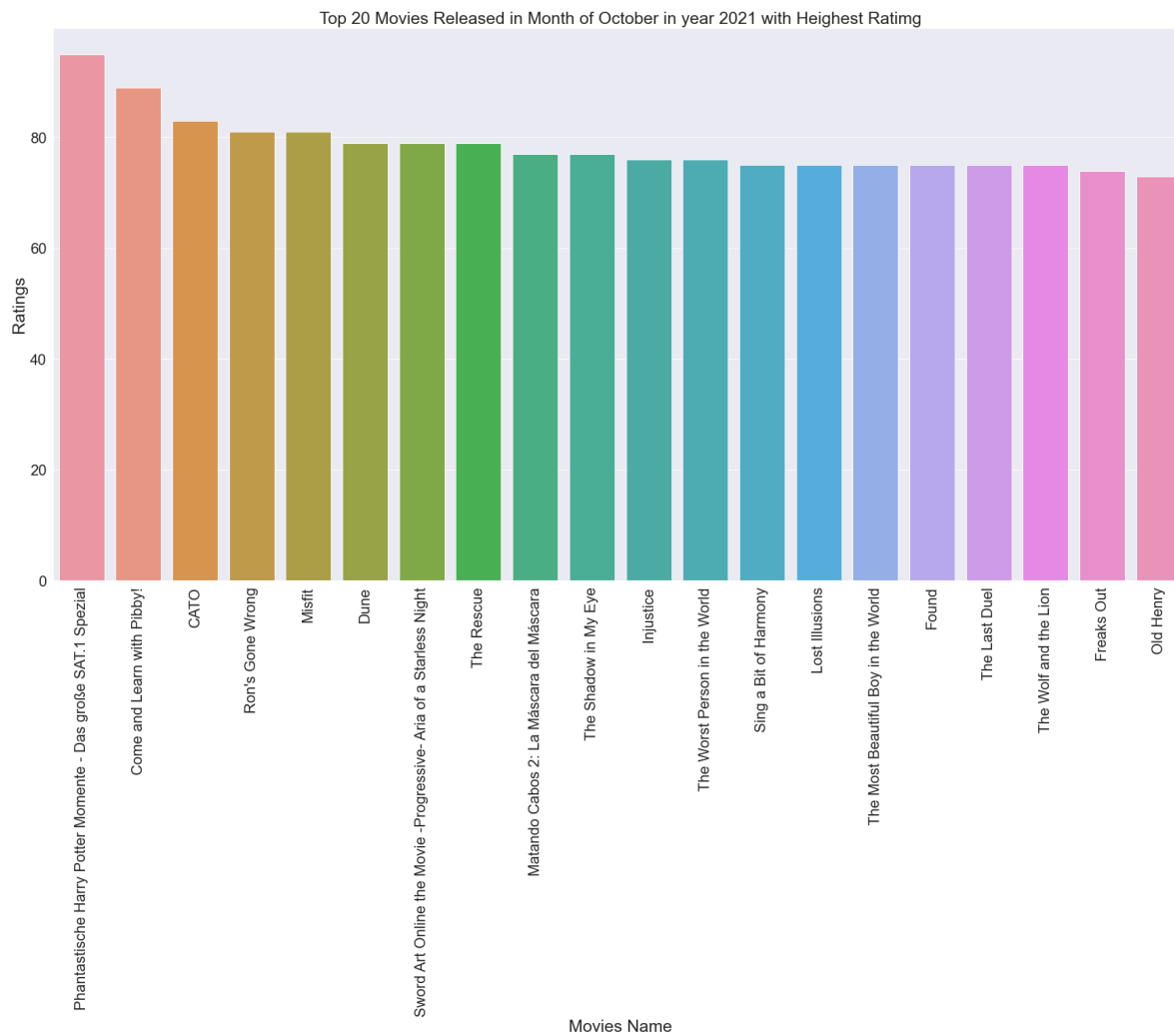
Out[139]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
2585	Phantastische Harry Potter Momente - Das große...	95.0	2021-10-31	None	-	-
7497	Come and Learn with Pibby!	89.0	2021-10-30	2m	Animation, Horror	Dodge Greenley
5410	CATO	83.0	2021-10-14	None	Drama	Peta Rivero y Hornos
196	Ron's Gone Wrong	81.0	2021-10-22	1h 47m	Animation, Science Fiction, Family, Comedy	Sarah Smith
1217	Misfit	81.0	2021-10-15	1h 30m	Comedy, Romance	Orlando Herrera
...	...	...	...	...	...	...
1054	Cube	43.0	2021-10-22	1h 48m	Thriller, Mystery, Science Fiction, Horror	Yasuhiko Shimizu
521	Nobody Sleeps in the Woods Tonight 2	41.0	2021-10-27	1h 37m	Horror, Thriller, Comedy	Bartosz M. Kowalski
2073	Sharkdog's Fintastic Halloween	40.0	2021-10-15	24m	Animation, Fantasy, Family	Jacinth Tan Yi Ting
9013	La Bruja	20.0	2021-10-28	None	Drama, Horror	Ronny A. Sosa
62	The Nights Belong to Monsters	20.0	2021-10-09	1h 36m	Fantasy, Drama	Sebastián Perillo

103 rows × 6 columns

In [141]:

```python
plt.figure(figsize=(30,15))
sns.barplot(x='Movie Name', y='Rating',data=movies_oct_2021.head(20))
plt.title('Top 20 Movies Released in Month of October in year 2021 with Heighest Ratimg
plt.xlabel('Movies Name',fontsize=25)
plt.ylabel('Ratings',fontsize=25)
plt.xticks(rotation=90)
plt.show()
```


Top 20 Movies Released in Month of October in year 2021 with Heighest Ratimg

In [ ]:

```
1
```

In [128]:

```
1  months = [1,2,3,4,5,6,7,8,9,10,11,12]
2  for i in months:
3      count = len(data[data['Release Date'].dt.month==i])
4      print(f'{i} movie count is {count}')
```

```
1 movie count is 718
2 movie count is 762
3 movie count is 853
4 movie count is 764
5 movie count is 675
6 movie count is 884
7 movie count is 877
8 movie count is 897
9 movie count is 848
10 movie count is 1030
11 movie count is 805
12 movie count is 887
```
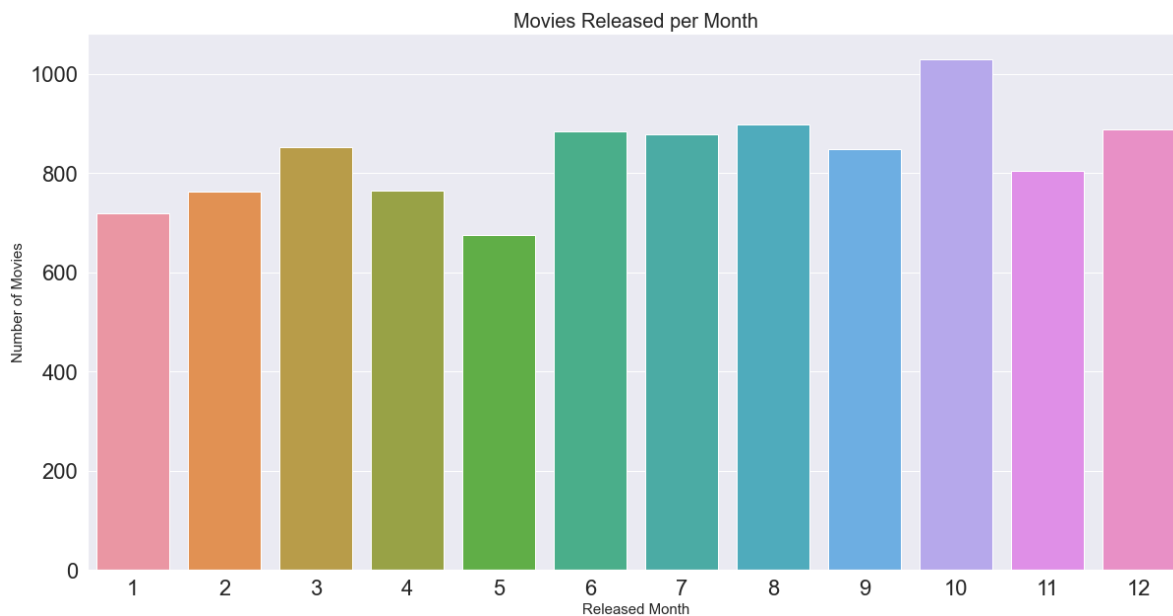
In [ ]:

```
1
```

In [126]:

```python
plt.figure(figsize=(20,10))
sns.countplot(data['Release Date'].dt.month)
plt.title('Movies Released per Month',fontsize=20)
plt.xlabel('Released Month',fontsize=15)
plt.ylabel('Number of Movies',fontsize=15)
plt.show()
```

C:\Users\Yash\anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureW
arning: Pass the following variable as a keyword arg: x. From version 0.12,
the only valid positional argument will be `data`, and passing other argumen
ts without an explicit keyword will result in an error or misinterpretation.
  warnings.warn(

In [ ]:

```
1
```

In [ ]:

```
1
```

In [94]:

```
1  df
```

Out[94]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
0	Doctor Strange in the Multiverse of Madness	75.0	2022-05-06	None	Fantasy, Action, Adventure	Steve Ditko
1	Fantastic Beasts: The Secrets of Dumbledore	68.0	2022-04-15	None	Fantasy, Adventure, Action	David Yates
2	Dog	74.0	2022-02-18	None	Drama, Comedy	Reid Carolin
3	Sonic the Hedgehog 2	77.0	2022-04-08	None	Action, Adventure, Family, Comedy	Josh Miller
4	Morbius	65.0	2022-04-01	None	Action, Science Fiction, Fantasy	Daniel Espinosa
...	...	...	...	...	...	...
9995	The Scary House	57.0	2020-10-30	None	Family, Fantasy, Horror	Daniel Prochaska
9996	Maria Full of Grace	73.0	2004-04-01	None	Drama, Thriller, Crime	Joshua Marston
9997	The Art of Getting By	66.0	2011-06-17	None	Drama, Romance	Gavin Wiesen
9998	I'm a Girl, I'm a Princess	60.0	2021-10-28	None	Drama	Federico Palazzo
9999	Lake Eerie	38.0	2016-01-15	None	Thriller, Horror, Science Fiction	Chris Majors

10000 rows × 6 columns

In [ ]:

```
1
```

In [ ]:

```
1
```

In [ ]:

```
1
```

In [88]:

```python
1  df['Run Time']
```

Out[88]:

```
0         2h 6m
1        2h 22m
2        1h 42m
3         2h 2m
4        1h 45m
          ...
9995     1h 40m
9996     1h 41m
9997     1h 23m
9998         2h
9999     1h 44m
Name: Run Time, Length: 10000, dtype: object
```

In [ ]:

```
1
```

In [ ]:

```
1
```

In [143]:

```
1  #grp_rating=data['Rating'].groupby(data['Release Date'].dt.year).describe()
2  #grp_rating
3  df
```

Out[143]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
0	Doctor Strange in the Multiverse of Madness	75.0	2022-05-06	2h 6m	Fantasy, Action, Adventure	Steve Ditko
1	Fantastic Beasts: The Secrets of Dumbledore	68.0	2022-04-15	2h 22m	Fantasy, Adventure, Action	David Yates
2	Dog	74.0	2022-02-18	1h 42m	Drama, Comedy	Reid Carolin
3	Sonic the Hedgehog 2	77.0	2022-04-08	2h 2m	Action, Adventure, Family, Comedy	Josh Miller
4	Morbius	65.0	2022-04-01	1h 45m	Action, Science Fiction, Fantasy	Daniel Espinosa
...	...	...	...	...	...	...
9995	The Scary House	57.0	2020-10-30	1h 40m	Family, Fantasy, Horror	Daniel Prochaska
9996	Maria Full of Grace	73.0	2004-04-01	1h 41m	Drama, Thriller, Crime	Joshua Marston
9997	The Art of Getting By	66.0	2011-06-17	1h 23m	Drama, Romance	Gavin Wiesen
9998	I'm a Girl, I'm a Princess	60.0	2021-10-28	2h	Drama	Federico Palazzo
9999	Lake Erie	38.0	2016-01-15	1h 44m	Thriller, Horror, Science Fiction	Chris Majors

10000 rows × 6 columns

In [147]:

```
1  top_Rated_movies =df.groupby('Movie Name')[['Rating','Release Date','Run Time','Genres'
2  top_Rated_movies
```

Out[147]:

	Movie Name	Rating	Release Date	Run Time	Genres	Director
0	Jean Claude Van Damme's Damn Van	100.0	2014-11-10	None	-	Bradley Haag
1	Furry Friends Forever: Elmo Gets a Puppy	100.0	2021-08-05	26m	Animation, Family	Mark Taylor
2	Naruto: Shippuden	100.0	2007-02-15	22m	Animation	Hayato Date
3	Hot Neighbors	100.0	2016-01-28	1h 5m	Drama, Romance	Lee Jun
4	Bob Esponja: Días de Cangreburgers	95.0	2016-06-08	None	-	-
...	...	...	...	...	...	...
9651	Hers	0.0	2022-06-30	None	Romance, Drama	James Landon Jr
9652	Sherdil: The Pilibhit Saga	0.0	2022-06-24	None	Drama	Srijit Mukherji
9653	Hentai kinbaku chôkyô	0.0	1985-04-01	1h 1m	-	Mamoru Watanabe
9654	Shotgun Wedding	0.0	2022-06-29	None	Comedy, Action	Jason Moore
9655	개들의 도시	0.0	2022-06-29	None	Action	오정택

9656 rows × 6 columns

In [148]:

```python
plt.figure(figsize=(30,15))
sns.barplot(x='Movie Name', y='Rating',data=top_Rated_movies.head(20))
plt.title('top_Rated_movies',fontsize=25)
plt.xlabel('Movies Name',fontsize=25)
plt.ylabel('Ratings',fontsize=25)
plt.xticks(rotation=90)
plt.show()
```

In [ ]:

```
1
```

In [203]:

```
 1  def time (data):
 2      data=data.replace('m',' ')
 3      data=data.split()
 4      if len(data)==1:
 5          if data[0][-1]=='h':
 6              hrs= int(data[0][0])
 7              return (hrs*60)
 8          elif data == 'None':
 9              return 0
10          else:
11              return (data[0][-1])
12      else:
13          hrs = int(data[0] [0])
14          total_time=int(hrs*60)+int(data[1])
15          return total_time
```

In [205]:

```
 1  df['Run Time']=df['Run Time'].apply(time)
 2  df['Run Time']
```

Out[205]:

```
0        126
1        142
2        102
3        122
4        105
       ...
9995     100
9996     101
9997      83
9998     120
9999     104
Name: Run Time, Length: 10000, dtype: object
```

In [206]:

```
1  df[:50]
```

Out[206]:

	Movie Name	Raiting	Release Date	Run Time	Genres	Dire
0	Doctor Strange in the Multiverse of Madness	75.0	05/06/2022	126	Fantasy, Action, Adventure	Steve D
1	Fantastic Beasts: The Secrets of Dumbledore	68.0	04/15/2022	142	Fantasy, Adventure, Action	David Y:
2	Dog	74.0	02/18/2022	102	Drama, Comedy	F Car
3	Sonic the Hedgehog 2	77.0	04/08/2022	122	Action, Adventure, Family, Comedy	Josh M
4	Morbius	65.0	04/01/2022	105	Action, Science Fiction, Fantasy	Da Espin
5	The Lost City	68.0	03/25/2022	112	Action, Adventure, Comedy	Aaron
6	Spider-Man: No Way Home	81.0	12/17/2021	148	Action, Adventure, Science Fiction	Steve D
7	Memory	73.0	04/29/2022	114	Action, Thriller, Crime	Ma Camp
8	Collision	60.0	06/16/2022	99	Thriller, Crime, Drama	Fal Mart
9	Centauro	66.0	06/15/2022	89	Action, Crime, Thriller	Da Calpars
10	Spiderhead	57.0	06/17/2022	106	Science Fiction, Thriller	Jos Kosi
11	Jurassic World Dominion	67.0	06/10/2022	147	Action, Adventure, Science Fiction	C Trevor
12	The Black Phone	72.0	06/24/2022	103	Horror, Thriller	S Derrick
13	Shark Bait	70.0	05/13/2022	87	Horror, Thriller, Action	Jar N
14	Panama	59.0	03/17/2022	100	Action, Thriller	M Nevelo
15	The Northman	73.0	04/22/2022	137	Action, Adventure, Fantasy	Ro Egg
16	Turning Red	75.0	03/10/2022	100	Animation, Family, Comedy, Fantasy	Domee
17	Uncharted	71.0	02/18/2022	116	Action, Adventure	Ru Fleisc
18	The Desperate Hour	61.0	09/12/2021	84	Thriller	Ph No
19	Hustle	79.0	06/03/2022	118	Drama, Comedy	Jeren Za

	Movie Name	Raiting	Release Date	Run Time	Genres	Direc
20	The Wrath of God	64.0	06/15/2022	97	Thriller, Drama	Sebas Schir
21	Beyond Infinity: Buzz and the Journey to Light...	72.0	06/10/2022	5	Documentary	T Kap
22	The Batman	78.0	03/04/2022	177	Crime, Mystery, Thriller	N Ree
23	Clean	64.0	01/28/2022	93	Crime, Drama, Thriller	Paul S
24	The Unbearable Weight of Massive Talent	71.0	04/22/2022	107	Action, Comedy, Crime	Gormi
25	A Day to Die	63.0	06/23/2022	101	Action, Thriller, Crime	Dwa H
26	Interceptor	63.0	05/26/2022	98	Action, Thriller, Adventure	Mattl R
27	Dragon Ball Super: Super Hero	80.0	08/26/2022	99	Animation, Science Fiction, Action	A Toriya
28	See for Me	63.0	01/28/2022	92	Thriller, Drama, Crime, Mystery, Horror	Ran O
29	Lightyear	71.0	06/17/2022	107	Animation, Science Fiction, Adventure, Action,...	An MacL
30	The Exorcism of God	69.0	03/31/2022	98	Horror	Alejar Hida
31	Top Gun: Maverick	84.0	05/27/2022	131	Action, Drama	Jack E
32	American Sicario	56.0	01/06/2022	90	Crime, Action	RJ Co
33	The Bad Guys	78.0	04/22/2022	100	Animation, Comedy, Family, Crime	Pi Pe
34	Gasoline Alley	53.0	02/25/2022	97	Action, Thriller, Crime, Mystery	Edw Dr
35	Encanto	77.0	11/24/2021	102	Animation, Comedy, Family, Fantasy	Jared B
36	Moonfall	65.0	02/04/2022	130	Science Fiction, Adventure, Action	Rol Emme
37	Veneciafrenia	57.0	04/21/2022	100	Horror	Álex d Igl
38	Chickenhare and the Hamster of Darkness	77.0	02/16/2022	91	Adventure, Animation, Comedy, Family, Fantasy	Stas
39	Thor: Love and Thunder	75.0	07/08/2022	119	Action, Adventure, Fantasy	Taika W
40	The Contractor	65.0	03/10/2022	103	Action, Thriller	Tarik S：
41	Father There Is Only One	74.0	08/02/2019	95	Comedy	Santi Seg

	Movie Name	Raiting	Release Date	Run Time	Genres	Dire
42	Demon Slayer -Kimetsu no Yaiba- The Movie: Mug...	84.0	08/13/2021	117	Animation, Action, Adventure, Fantasy	Ha Soto
43	Titanic 666	55.0	04/15/2022	91	Thriller, Horror	Nick L
44	Chip 'n Dale: Rescue Rangers	72.0	05/20/2022	99	Animation, Family, Comedy, Adventure, Mystery	A Scha
45	Hotel Transylvania: Transformania	71.0	02/25/2022	87	Animation, Family, Fantasy, Comedy, Adventure	Gen Tartakov
46	Minions: The Rise of Gru	80.0	07/01/2022	87	Family, Animation, Action, Adventure, Comedy	Matt Fo
47	The Jack in the Box: Awakening	59.0	02/24/2022	89	Horror	Lawre Fo
48	The Grandmother	59.0	01/28/2022	100	Horror	Paco Pl
49	Dark Cloud	67.0	06/28/2022	81	Science Fiction, Horror, Thriller	Jay N

In [ ]:

```
1
```